

Application No.: 09/745,927

**REMARKS**

Claims 1-21 are pending in this application. Claims 2, 7-9, 12 and 21 have been canceled. Claims 1 and 10 have been amended.

Claims 1, 7 and 10 were rejected under 35 USC §112, first paragraph, as failing to comply with the written description requirement. The examiner stated that Claims 1, 7 and 10 "have been amended to include claim limitation wherein a computer attached to the physical document includes a processor for updating and modifying the recorded information in digital form and the metadata pertaining to the physical document and that this limitation has no support in the disclosure and is considered new matter." Applicants respectfully disagree. Support for this language can be found in the specification on page 3, lines 13-21: "By attaching small, inexpensive, computing devices (such as, for example, an iButton by Dallas Semiconductor or a smartcard) to paper documents, various electronic information associated with the physical document can be retained, updated and modified." See also page 5, lines 23-28 of the specification: "There are various versions of the iButton available, some of which are just memory and others which have processing and cryptographic capabilities. The Java iButton contains memory, a processor which runs a Java™ virtual machine and a battery which can maintain the internal memory for ten years. The Java iButton currently contains 64K of memory."

Claim 21 was were rejected under 35 USC §112, first paragraph, as failing to comply with the written description requirement in that the Examiner stated that the claimed language was not supported in the disclosure and considered new matter. Applicants respectfully disagree. Support for Claim 21 can be found in the specification on page 7, lines 23-27: "Storing the URLs of the actions associated with document and their corresponding positions on the printed document enables users to select parts of the document and trigger the associated action. Applets (small computer programs) which implement certain defined actions could be stored in the computing device and obviate the need for a network connection to access the applet online."

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Claims 1-3, 7, 9, 10-13 and 15-17 were rejected under 35 USC §102(e) as being anticipated by Ostrover et al. (U.S. Patent No. 6,585,154). Applicants respectfully disagree.

Claim 1, as amended, claims a programmable document, comprising: a physical document including at least one sheet of material and information recorded thereon; and a computer attached to the physical document, wherein the computer includes an input/output device, a memory storing the recorded information in digital form, any updates and modifications to the recorded information, all metadata pertaining to the physical document, wherein the metadata comprises at least one of processing information, version information, user comments, copy information, transformation information, distribution information and index information, a processor for updating and modifying the recorded information in digital form and the metadata pertaining to the physical document, and a computer program, stored in the memory, for implementing defined actions, operable by the processor, wherein the recorded information in digital form and all metadata pertaining to the physical document is available where the physical document is available.

Claim 10, as amended, claims a method for managing, retrieving and processing information about a physical document and modifications to the physical document, comprising: providing a computer, wherein the computer includes an input/output device, a processor for updating and modifying information pertaining to the physical document, and a memory; recording information on at least one sheet of material to generate a physical document; storing a digital copy of the recorded information, any updates and modifications to the recorded information, and all metadata pertaining to the physical document, wherein the metadata comprises at least one of processing information, version information, user comments, copy information, transformation information, distribution information and index information, in the memory; storing a computer program in the memory, for implementing defined actions, operable by the processor; associating the stored recorded information and metadata with the physical document; and attaching the computer to the physical document, wherein the recorded information in digital form and all metadata pertaining to the physical document is available where the physical document is available.

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1. A microchip is not a computer having a processor.

Ostrover does not teach or suggest a programmable document, comprising: a physical document including at least one sheet of material and information recorded thereon; and a computer attached to the physical document, wherein the computer includes, in part, "a processor for updating and modifying the recorded information in digital form and the metadata pertaining to the physical document." Ostrover teaches a microchip and for "purposes of this specification and the accompanying claims the term 'microchip' refers to a machine-writeable and machine-readable device capable of storing electronic data." See col. 4, lines 1-4 of Ostrover. A microchip according to Ostrover has less functionality than a computer having a processor. The only processors disclosed in Ostrover are located off the microchip. The only processors disclosed in Ostrover are located in computer 44 (see Fig. 2) which are not affixed to the writing surface 42.

2. Ostrover does not teach a computer program stored on the memory.

The Examiner cited col. 4, lines 1-23; col. 5, lines 9-45 and col. 6, lines 1-60 for disclosing "a computer program, stored in the memory, for implementing defined actions, operable by the processor." Applicants reviewed these sections of Ostrover and could find no mention of a computer program stored on the microchip. Indeed, it is unlikely that Ostrover would have any reason to store a computer program on a microchip since there is no processor on the microchip to operate it. Arguably, Ostrover teaches storing electronic data on a microchip and a computer program can be considered as "electronic data". Even if a computer program were stored on the microchip of Ostrover, it would not be capable of "for implementing defined actions, operable by the processor" on the chip. Any computer program stored as electronic data on a microchip of Ostrover would have to be read by computer 44 and executed by computer 44, which is clearly not on a programmable document.

3. Ostrover does not recognize the document problems recognized by Applicants.

Ostrover is concerned with the problem of producing documents with an electronic copy of at least a portion of the content of the document attached thereto (col. 1, lines 56-58). Applicants are concerned with the problem of once the electronic document is printed almost all

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"meta" information (such as the version number, last date of modification, date of printing, change history, comments, authors, reviewer's ratings, etc.) is lost unless such information is explicitly printed on the document. Applicants are further concerned with the problem of retaining a record of each time a physical document is copied and each time a physical document is modified, such as when modifications are written directly on the paper document. Applicants' programmable document as claimed in Claim 1 and Applicants' method for managing, retrieving and processing information about a physical document and modifications to the physical document combine the advantages of electronic media with the convenience of paper. Applicants' programmable document enables a user to quickly retrieve the electronic version of a document and all associated meta information in any situation where the paper document is available. Applicants' programmable document enables a user to store comments about a paper document and modifications to the document in such a way that they can be retrieved and processed electronically, without having to access expensive computer equipment or a network.

Nothing in Ostrover et al. teaches or suggests a programmable document which includes a computer having, in part, a memory storing the recorded information in digital form, any updates and modifications to the recorded information, all metadata pertaining to the physical document, wherein the metadata comprises at least one of processing information, version information, user comments, copy information, transformation information, distribution information and index information.

Claims 5, 8 and 19 were rejected under 35 USC §103(a) as being unpatentable over Ostrover et al. in view of Porter (U.S. Patent No. 6,533,171). Claim 6 was rejected under 35 USC §103(a) as being unpatentable over Ostrover et al. in view of Klotz, Jr. (U.S. Patent No. 5,459,307). Claim 18 was rejected under 35 USC §103(a) as being unpatentable over Ostrover et al. in view of Choksi et al. (U.S. Patent No. 6,477,243). Claims 4 and 14 were rejected under 35 USC §103(a) as being unpatentable over Ostrover et al. in view of Friedman (U.S. Patent No. 5,417,508). Claim 20 was rejected under 35 USC §103(a) as being unpatentable over Ostrover et al. Applicants respectfully disagree. Nothing in any of Porter, Klotz, Jr., Choksi et al., or Friedman overcomes the lack of teachings of Ostrover et al.

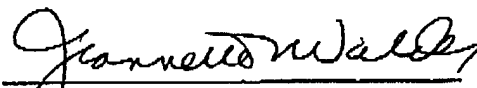
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Independent Claims 1, 7 and 10 are believed to be allowable. Since Claims 3-6 and 16-20 depend from Claim 1 and Claims 11, 13-15 depend from Claim 10, they are also believed to be allowable. Claims 1, 3-6, 10, 11, 13-20 are believed to be in condition for allowance.

No additional fee is believed to be required for this amendment; however, the undersigned Xerox Corporation attorney hereby authorizes the charging of any necessary fees, other than the issue fee, to Xerox Corporation Deposit Account No. 24-0025.

Reconsideration of this application and allowance thereof are earnestly solicited. In the event the Examiner considers a personal contact advantageous to the disposition of this case, the Examiner is requested to call the undersigned Attorney for Applicants, Jeannette Walder.

Respectfully submitted,



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Xerox Corporation  
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